

Income, Education, and Commuting Decisions in the NYC Metro Area

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The environment surrounding urban areas benefits from the availability of various modes of transportation. As more commuters choose public forms of transportation in their daily work commute, the likely decrease in vehicle emissions leads to less stress being placed on the environment. Transportation economics literature frequently relates an individual's chosen mode of commuting to work (rail, bus, drive, and non-motorized) to many factors, two of which are income and education. This poster shows the results of an analysis of the relationship between income and education and how they differ between commuting modes. The study area is the effective commuting area surrounding New York City, which includes portions of New York, Connecticut, and New Jersey. Simple comparisons between mode, income, and education are presented to illustrate whether the basic relationships identified in the literature hold for these data. Color-coded maps of the study area will be used to show the spatial distribution of commute mode, income, and education. Results from a regression are then presented to test that the basic relationships between mode, income, and education identified above still hold while controlling for other factors. The control factors include but are not limited to population density, commute time, distance to the New York City central business district, and number of children in the household. Tables and graphs will be used to convey how income and education varies by mode and how these are influenced by the control factors. Based on the literature, we posit that as income increases, people will move from public modes of transportation to private modes. However, as education increases, people will move from private modes of transportation to public modes. Education is often a determinant of income. This interaction will be controlled for in the regression model. Commuting mode data is based on a household transportation survey administered by the New York Metropolitan Transportation Council (NYMTC) and on 1990 U.S. Census block level data.

The presented results are based on a set of projects related to the relationship between transportation options and household choices using these and other data by economists at the EPA's National Center for Environmental Economics—Jay Harvard, Ann Wolverton and Julie Hewitt—along with Colin Vance of Institut für Verkehrsforschung, Germany. It is the hope of these researchers that findings will further policymakers' understanding of the factors that influence individuals' transportation choices and highlight possible ways to encourage the use of public transportation. The researchers also hope that the results of this analysis will aid in distinguishing between the confounding effects of income and education.